PATENT

STEVEN R. BINDER et al.

Application No.: 09/691,405; Examiner: Allen, Marianne P.; Art Unit: 1631

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Riboproteins P0, P1, and P2

dsDNA

Nucleosome

Ku

Centromere A

Centromere B

Scl-70

Pm-Scl

RNA-Polymerases 1, 2, and 3

Th

Jo-1

Mi-2

PL7

PL12

SRP

IN THE CLAIMS:

Cancel claim 11 and amend claims 1, 2, 3, 7, and 8 to read as shown in the following clean versions. These claims are reproduced in Appendix B hereto with markings to show the changes made by this amendment.

disease in a test subject suspected of suffering from an otherwise unidentified systemic

autoimmune disease selected from the group consisting of systemic lupus erythmatosus,

scleroderma, Sjögren's syndrome, polymyositis, dermatomyositis, CREST, and mixed

1. (amended) A method for the identification of a systemic autoimmune

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(a) analyzing a single biological sample from said test subject for the

connective tissue disease, said method comprising:

presence and amounts of a plurality of autoantibodies to produce a test data set;

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	8	(b) comparing aid test data set to a library of reference data sets, each
	9	reference data set obtained from a biological sample of a reference subject known
	10	to have a systemic autoin mune disease of known identity; and
	11	(c) applying pattern recognition means selected from the group consisting
	12	of k-nearest neighbor analysis, multi-linear regression analysis, Bayesian
	13	probabilistic reasoning, and principal component analysis to produce a
	14	statistically derived decision indicating which systemic autoimmune disease said
	15	test subject is suffering from.
	1	2. (amended) A method in accordance with claim 1 in which said test
	2	subject is suffering from two otherwise unidentified systemic autoimmune diseases, and
	3	step (c) comprises applying pattern recognition means to produce a statistically derived
	4	decision indicating which two systemic autoimmune diseases said test subject is suffering
	5	from.
	1	3. (amended) A method in accordance with claim 1 in which said pattern
d	2	recognition means is a member selected from the group consisting of k-nearest neighbor
~	3	analysis, multi-linear regression analysis, and Bayesian probabilistic reasoning.
	1	7.\(\)(amended) A method in accordance with claim 1 in which said
\	2	plurality of autoantibodies comprises antibodies to at least fifteen of the following
	3	antigens:
ر يا	4	SSA 60,
	5	SSA 52
	6	SSB 48,\
	7	Sm BB',
	8	Sm D1,
_	9	RNP 68,
	10	RNP A,

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RNP C,

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12	Fibrillarin,
13	Riboproteins P0, P1, and P2,
14	dsDNA,
15	Nucleosome,
16	Ku,
17	Centromère A,
18	Centromere B,
19	Scl-70,
20	Pm-Scl,
21	RNA-Polymerases 1, 2, and 3,
22	Th,
23	Jo-1,
24	Mi-2,
25	PL7,
26	PL12, and
27	SRP.
1	8. (amended) A method in accordance with claim 1 in which said
2	plurality of autoantibodies comprises antibodies to each of the following antigens:
3	SSA 60,
<i>3</i> 4⁺	SSA 52,
5	SSB 48,
6	Sm BB',
7	Sm D1,
8	RNP 68,
9	RNP A,
10	
10 11	RNP C, Fibrillarin,

